

Work Order ID 52067

September 16, 2009 7:10:54 AM



Page 1

Item ID: D6102-010

Accept



Setup Start



Revision ID: D

Stop



Item Name: Saddle Billet

Start Date: 9/16/09 Start Qty: 40.00



Cust Item ID:

Required Date: 9/30/09 Req'd Qty: 40.00



Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D6102

Rev D

100

0.00



PURCHASING

Purchasing

Memo

0.00

Purchasing

Issue P/O: 10412 (a) Description: Aluminum Billet (b) 7.950" x 8.250" x 2.500" thick (c) Tolerance on all dimensions is +0.06/0.00 (d) Grain direction along 7.950" length (e) Material: 6061-T6/T6511 (QQ-A-250/11 or QQ-A-200/8) Material release certifi

CL 09/09/16 (40)

110

Receive & Inspect for Damage & Mat'l Certs

0.00



Packaging

Memo

0.00

Packaging

Ensure material certification is attached

CL 9/9/22 46

120

QC6- Inspect dimensions to drawing

0.00



QC

Memo

0.00

Quality Control

Check certification to Dwg D6102 for compliance

CL 09/09/22

45

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

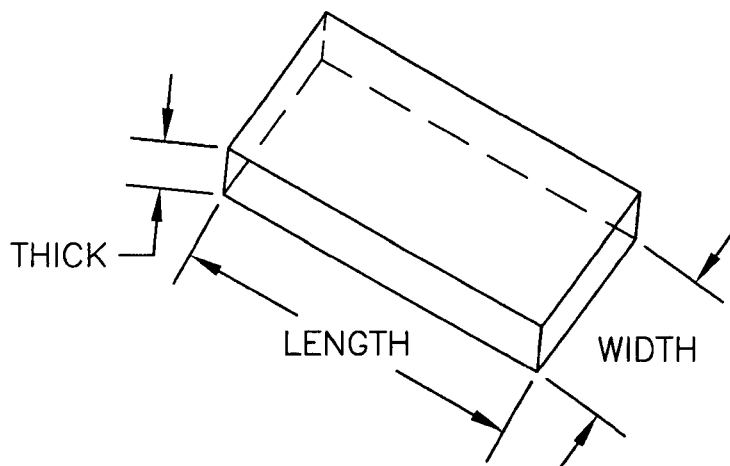
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN #	DRAWN BY PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED CP	APPROVED #	DRAWING NO. D6102	Rev. D SHEET 1 OF 1
DATE 06.06.30		TITLE SADDLE BILLET, 6061	SCALE NTS
A	01.03.30	NEW ISSUE	
B	03.10.20	ADD D6102-005/-007/-009	
C	04.08.25	ADD D6102-010/-011	
D	06.06.30	ADD D6102-013	

SPECIFICATION CONTROL DRAWING



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 52067

RELEASED

06.08.15 #

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.06/-0.00), AND GRAIN DIRECTION AS SHOWN.

TOLERANCE ON ALL DIMENSIONS IS +0.06/-0.00.

ALL DIMENSIONS ARE IN INCHES.

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6102-001	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	7.880	6.250	2.000	Along 7.880 Length
D6102-003	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	6.000	6.250	2.000	Along 6.000 Length
D6102-005	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	47.85	15.250	1.000	Along 47.85 Length
D6102-007	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	7.500	7.000	2.500	Along 7.500 Length
D6102-009	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	11.000	6.000	5.000	Along 11.000 Length
D6102-010	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	7.950	8.250	2.500	Along 7.950 Length
D6102-011	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	6.500	8.250	2.500	Along 6.500 Length
D6102-013	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	6.500	7.000	2.000	Along 6.500 Length

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SOLD TO:
DART AEROSPACE LTD
1270 ABERDEEN STREET

SHIP TO:
DART AEROSPACE LTD
1270 ABERDEEN STREET

SPECIAL INSTRUCTIONS

HAWKESBURY , ON
K6A 1K7
Contact: LINDA

HAWKESBURY , ON
K6A 1K7
Ship Terms: PREPAID

MTR:Y

Currency		Sales Person	Customer Phone	Customer Fax	Customer PO	
CANADIAN DOLLARS		ERYCK BLAIS	(613) 632-5200	(613) 632-1053	P010412	
Sales Order	Terms	Ship Via		Date Ordered	Date Required	Date Shipped
W018552	NET 30 DAYS	NIR:R-557065-1		09/17/09	09/22/09	09/22/09

Ordered	Back Ordered	Unit	Description	Bundle #	Heat #	Shipped
40		PC	ALUMINUM - LB 6061-T6 2 1/2" X 8 1/4" X 7.95" 803 LB / 45 PC	L031389	475042A8	45
40		PC	CUT WITH GRAIN ON LENGHT 7.95" 6061-T6 2 1/2" X 8 1/4" X 6 1/2" 615 LB / 42 PC	L031390	475042A8	46
			61 LB / 4 PC	L031391	475042A8	42
			CUT WITH GRAIN ON LENGHT 6 1/2" SPEC QQ-A-250/11			4
Skids: 2				Total Weight:		1,479 LB

Received by: _____ Date: _____ Signature: _____

SHIP TO: ASA ALLOYS INC 81 STEINWAY BLVD ETOBICOKE, ON, CA M9W 6H6
SOLD TO: ASA ALLOYS INC 81 STEINWAY BLVD ETOBICOKE, ON, CA M9W 6H6

KAISER
ALUMINUM
 Trentwood Works - Spokane, WA 99215
 Phone: (800) 367-2586

72913
 72914
 2/8

CERTIFIED TEST REPORT

Serial Number
 4167054

CUSTOMER PO NUMBER: 080853-DRB		WORK PACKAGE:		CUSTOMER PART NUMBER:		SHIP RUN/LOAD ID: 101587/6		GOV'T CONTRACT NUMBER:	
KAISER ORDER NO: 1084958	LINE ITEM: 14	SHIP DATE: 23-JUL-2009	ALLOY: 6061	CLAD: BARE	TEMPER: T651	PRODUCT DESCRIPTION: KaiserSelect® Precision Plate			
WEIGHT SHIPPED: 4324 LB	QUANTITY: 2 PCS EST.	B/L NUMBER: 2023415		GAUGE: 2.5000 IN		DIAMETER/WIDTH: 60.500 IN		LENGTH: 144.500 IN	

Certified Specifications

AMS 4027/RevN
 ASTM B 209/Rev07

AMS-QQ-A-250/11/RevA

ASME SB 209/Rev2004

Test Code: 1511

Test Results

Lot: 475042A8 Cast 732 Drop 33 Ingot 1

(ASTM E8/B557)
 (EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T651	LT / 2 (Min:Max)	49.0 : 49.4 (338 : 341)	44.2 : 44.6 (305 : 308)	12.9 : 12.9

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.73	0.6	0.31	0.05	1.1	0.20	0.20	0.01	0.01	0.00	TOT 0.04

Lot: 475186A3 Cast 732 Drop 43 Ingot 3

(ASTM E8/B557)
 (EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T651	LT / 2 (Min:Max)	49.1 : 49.7 (339 : 343)	44.2 : 44.8 (305 : 309)	12.8 : 12.8

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.72	0.6	0.29	0.04	1.0	0.22	0.21	0.01	0.01	0.00	TOT 0.03

KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215

Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number

4167054

ALLOY LIMITS

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
6061 MIN	0.40	0.0	0.15	0.00	0.8	0.04	0.00	0.00	0.00	0.00	EACH	0.05
MAX	0.8	0.7	0.40	0.15	1.2	0.35	0.25	0.15	0.05	0.05	TOT	0.15

Aluminum Remainder

TEST NOTES

6061 sheet or plate certified to AMS 4025, AMS 4026, or AMS

4027 also meets applicable requirements of AMS-QQ-A-250/11,

Rev. A.

CERTIFICATION

KAISER ALUMINUM FABRICATED PRODUCTS, LLC (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MELTED IN THE UNITED STATES OF AMERICA OR A QUALIFYING COUNTRY PER DFARS 225.872-1(a), WAS MANUFACTURED IN THE UNITED STATES OF AMERICA, AND MEETS THE REQUIREMENTS OF DFARS 252.225 FOR DOMESTIC CONTENT. THIS MATERIAL HAS BEEN INSPECTED, TESTED, AND FOUND IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT TREATED COMPLIES WITH AMS 2772. ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORTS SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF KAISER ALUMINUM FABRICATED PRODUCTS, LLC LABORATORY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. ISO-9001:2000 CERTIFIED.

BILL POYNOR, LABORATORIES SUPERVISOR



SHIP TO:

ASA ALLOYS INC
81 STEINWAY BLVD
ETOBICOKE, ON, CA M9W 6H6

KAISER
ALUMINUM

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

72913
72914
218

SOLD TO:

ASA ALLOYS INC
81 STEINWAY BLVD
ETOBICOKE, ON, CA M9W 6H6

CERTIFIED TEST REPORT

Serial Number

4167054

CUSTOMER PO NUMBER: 080853-DRB		WORK PACKAGE:	CUSTOMER PART NUMBER:		SHIP RUN/LOAD ID: 101587/6	GOVT CONTRACT NUMBER:
KAISER ORDER NO: 1084958	LINE ITEM: 14	SHIP DATE: 23-JUL-2009	ALLOY: 6061	CLAD: BARE	TEMPER: T651	PRODUCT DESCRIPTION: KaiserSelect® Precision Plate
WEIGHT SHIPPED: 4324 LB	QUANTITY: 2 PCS EST.	B/L NUMBER: 2023415	GAUGE: 2.5000 IN	DIAMETER/WIDTH: 60.500 IN	LENGTH: 144.500 IN	

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(EN 2002-1)

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(ASTM E1251)

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Actual	0.73	0.6	0.31	0.05	1.1	0.20	0.20	0.01	0.01	0.00	TOT 0.04

Lot: 475186A3 Cast 732 Drop 43 Ingot 3

(ASTM E8/B557)

(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T651	LT / 2 (Min:Max)	49.1 : 49.7 (339 : 343)	44.2 : 44.8 (305 : 309)	12.8 : 12.8

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
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KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number
4167054

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6061 MIN	0.40	0.0	0.15	0.00	0.8	0.04	0.00	0.00	0.00	0.00	EACH	0.05
MAX	0.8	0.7	0.40	0.15	1.2	0.35	0.25	0.15	0.05	0.05	TOT	0.15

Aluminum Remainder

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Rev. A.

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BILL POYNOR, LABORATORIES SUPERVISOR

